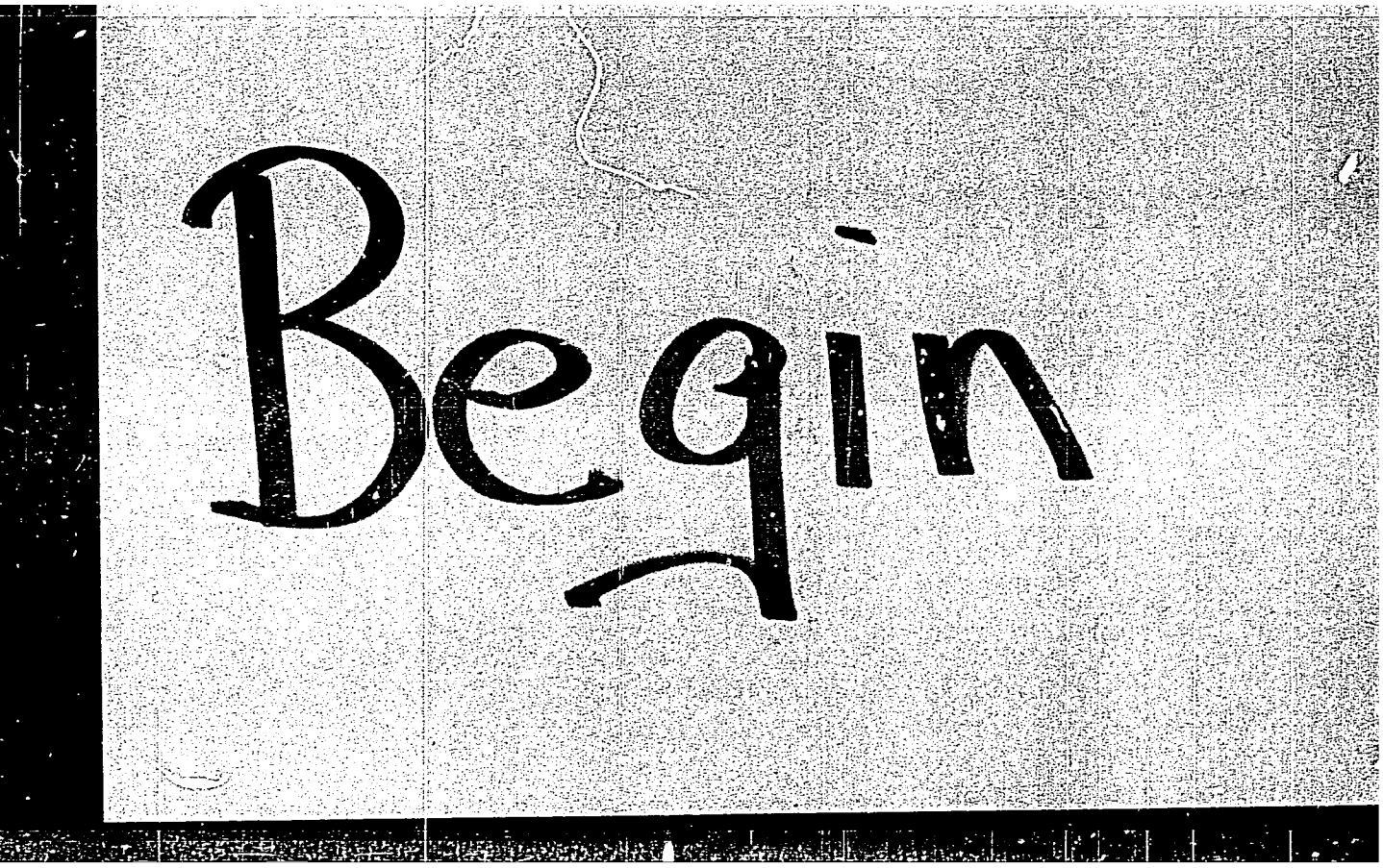
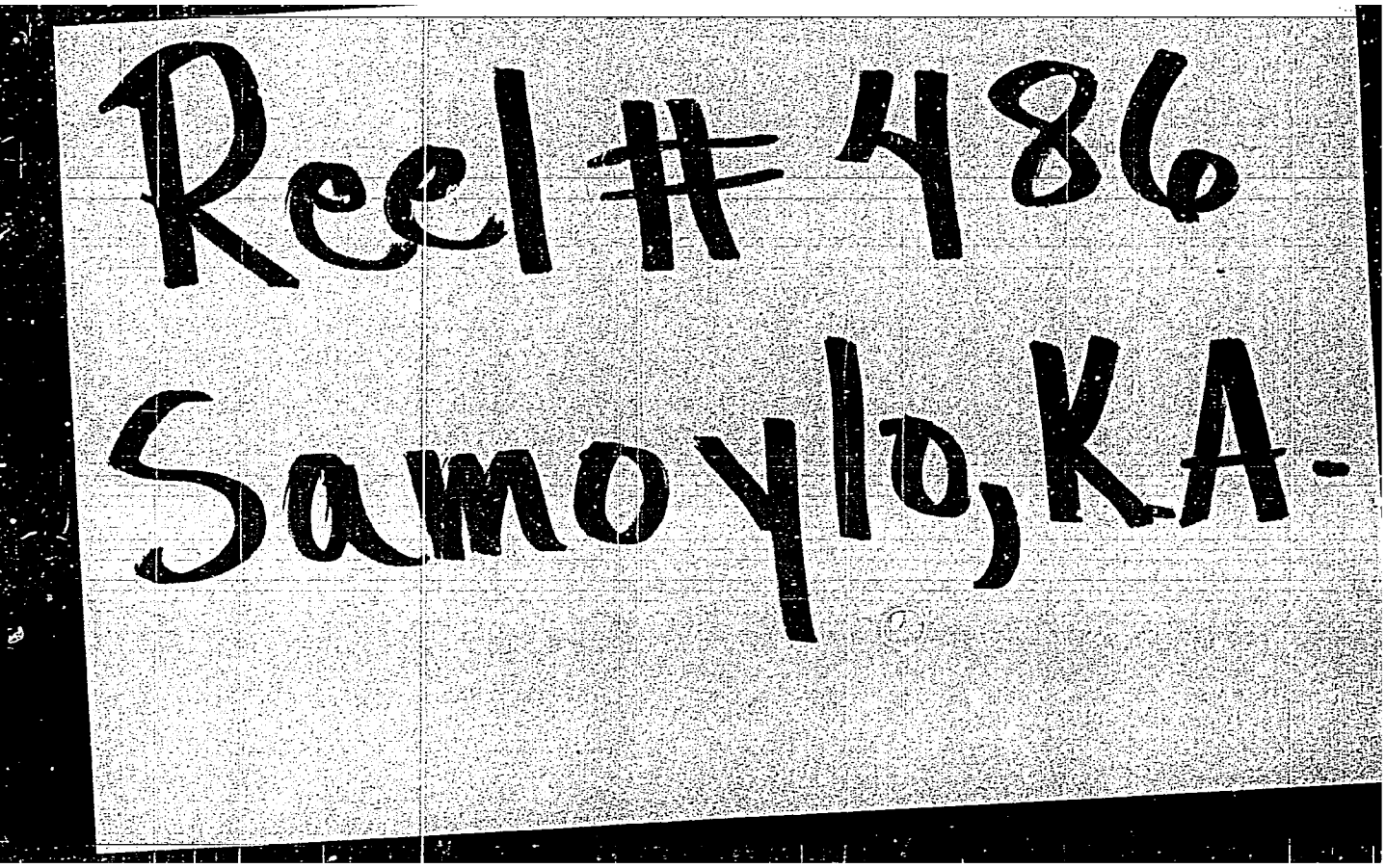




Final Abstract SAMOYLOK, N.D.

3114. SKT-6CONBEYORS FOR COAL TRANSPORT ON BENCHES (LEVELS) OF THIN SEAMS. Samoilok, N.D. (Mekhanizatsiya Trud. i Tyazhel. Rabot (Mechanization of Arduous Work), Apr. 1952, 9-12).

SAMOYLOV, A., komandir podrazdeleniya (Moskva)

Efficiency. Grazhd. av. 22 no.8:20-21 Ag '65. (MIRA 18:8)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001447010001-3"

SAMOYLOV, A. A.

"Author Reference of Dissertations on 'The Calculation of the Endurance Limit of Large Abutments of Bridges,' Presented in Partial Fulfillment of the Degree of Candidates of Technical Sciences." Cand Tech Sci, Leningrad Order of Lenin Inst of Railroad Transport Engineers imeni Academician V. N. Obraztsov, Leningrad, 1953. (KL, No 16, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

SAMOYLOV, A.A.

Statistical control methods. Izm.tekh. no.6:65 N-D '56.
(MLRA 10:1)

(Quality control)

SAMOYLOV, A.A., kandidat tekhnicheskikh nauk.

Calculating massive bridge supports by the method of limiting states. Transp.stroi. 6 no.2:24-26 F '56. (MLRA 9:6)
(Bridges, Pile)

MIKHALENKO, F.P.; SAMOYLOV, A.A.

Automatic feed used in high-speed cold sheet stamping. Kuz.-shtam.proizv. 1 no.3:33-36 My '59. (MIRA 12:10)
(Sheet-metal work)

BOGATYREV, A.I., inzh.; Prinimali uchastiye: SAMOYLOV, A.A., kand.tekhn.nauk; KUGEL'KO, B.I., inzh.

Experimental study of the torsion of two-sided reinforced concrete rods. Sbor. trud. LIIZHT no.174:263-272 '60. (MIRA 15:11)
(Concrete products--Testing) (Torsion)

FILIN, A.P., doktor tekhn.nauk, prof.; SAMOYLOV, A.A., kand.tekhn.nauk

Experimental study of models of reinforced concrete cupolas or shells. Sbor. trud. LIIZHT no.174:273-299 '60. (MIRA 15:11)
(Domes) (Roofs, Shell)

SAMOYLOV, A.A. (Moskva)

Method for adjusting the parameters of a compensator for a certain class of control systems. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.5:177-181 S-O '62. (MIRA 15:11)
(Automatic control)

KAPLAN, V.S.; SAMOYLOV, A.A.; TSIBAROV, Yu.A.

Testing models of supports for temporary arches in assembly chambers of subway stations without side platforms. Sbor. trud. LIIZHT no.192:279-290 '62. (MIRA 16:9)

SAMOYLOV, A.A. (Moskva)

Synthesis of a system for stabilizing the tightening of a hot strip in the finishing group of a thin plate mill. Avtom. i telem. 24 no. 12:1692-1701 D '63. (MIRA 17:1)

KUL'GAVIY, Ya.K.; SAMOYLOV, A.A.

Making and testing a model of mesh-reinforced concrete shells of double curvature. Sbor. trud. LIIZHT no.229:147-159 '64. (MIRA 18:8)

L 43704-66 EWI(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) DC

ACC NR: AP6023661 SOURCE CODE: UR/0103/66/000/004/0042/0047

58
B

AUTHOR: Pankov, R. A. (Moscow); Samoylov, A. A. (Moscow)

ORG: none

TITLE: A method of the approximate representation of nonlinearities and the application of statistical linearization to the analysis of closed-loop automatic systems

SOURCE: Avtomatika i telemekhanika, no. 4, 1966, 42-47

TOPIC TAGS: control statistics, linearization method, nonlinear automatic control system, dynamic system, algorithm, computer application

ABSTRACT: The authors investigate a method of approximate analysis of systems with variable parameters and nonstationary input signals. The statistical testing method is shown to be capable of providing an approximate analysis of a closed automatic system containing a unique and essentially nonlinear element, based on a Fourier series approximation of the characteristics of this nonlinear element. At the same time, by using a mathematical description of essential nonlinearities based on a statistical linearization approach, an algorithm is devised for the computation of the statistical characteristics of the output variables with the normally employed statistical testing stage omitted. Such an algorithm lends itself readily to computer

UDC: 62-501:519:25

Card 1/2

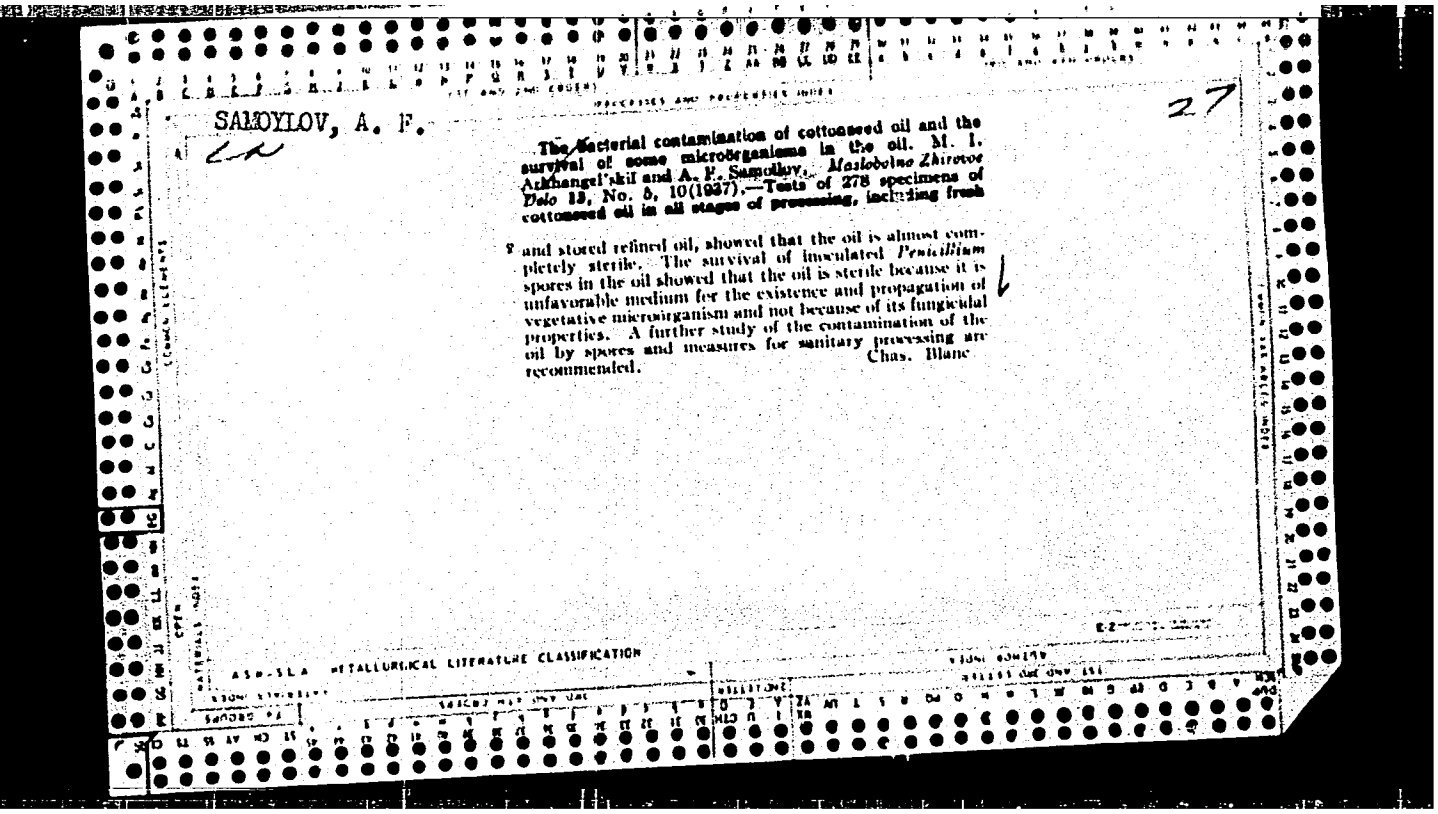
L 43704-66

ACC NR: AP6023661 O

processing. The following fundamental assumptions, proper to the statistical linearization method, are made: the input signal is an additive combination of the useful component and center-reduced noise; the random components of the signal have normal distribution (at the input of the nonlinear element as well); a system is provided to the problem of system accuracy estimation; the closed-loop unidimensional system contains only one essential nonlinearity, which is further assumed to be unique and non-inertial. Orig. art. has: 3 figures and 25 formulas.

SUB CODE: 13, 09,12/ SUBM DATE: 30Jul65/ ORIG REF: 004/ OTH REF: 001

Card 2/2 dm

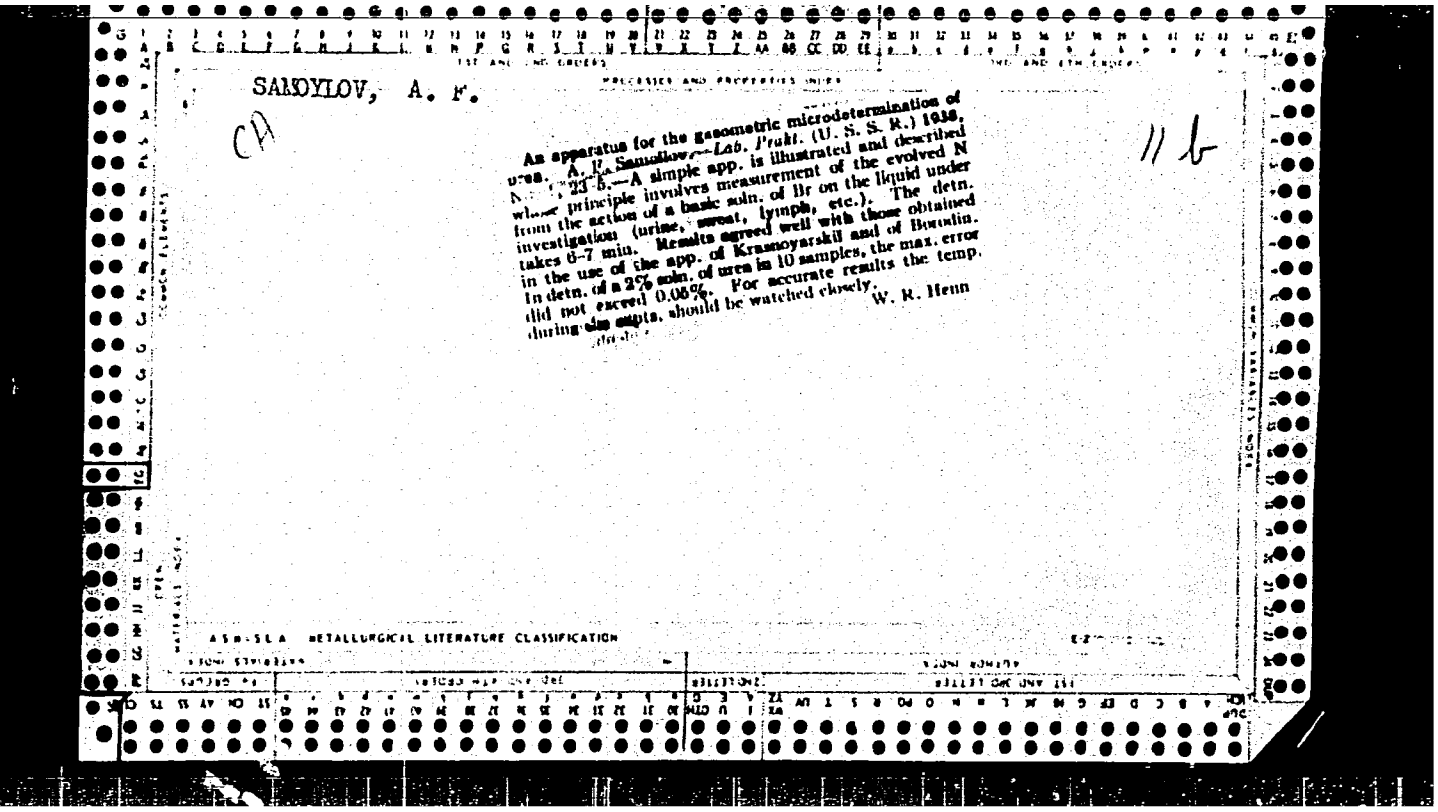


SAMOYLOV, A. F.

27

The bacterial contamination of cottonseed oil and the survival of some microorganisms in the oil. M. I. Arkhangel'skil and A. F. Samoilov. *Maslobelno Zhirovoe Delo* 13, No. 5, 10(1937).—Tests of 278 specimens of cottonseed oil in all stages of processing, including fresh and stored refined oil, showed that the oil is almost completely sterile. The survival of inoculated *Penicillium* spores in the oil showed that the oil is sterile because it is unfavorable medium for the existence and propagation of vegetative microorganism and not because of its fungicidal properties. A further study of the contamination of the oil by spores and measures for sanitary processing are recommended. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



SAMOYLOV, A. F.

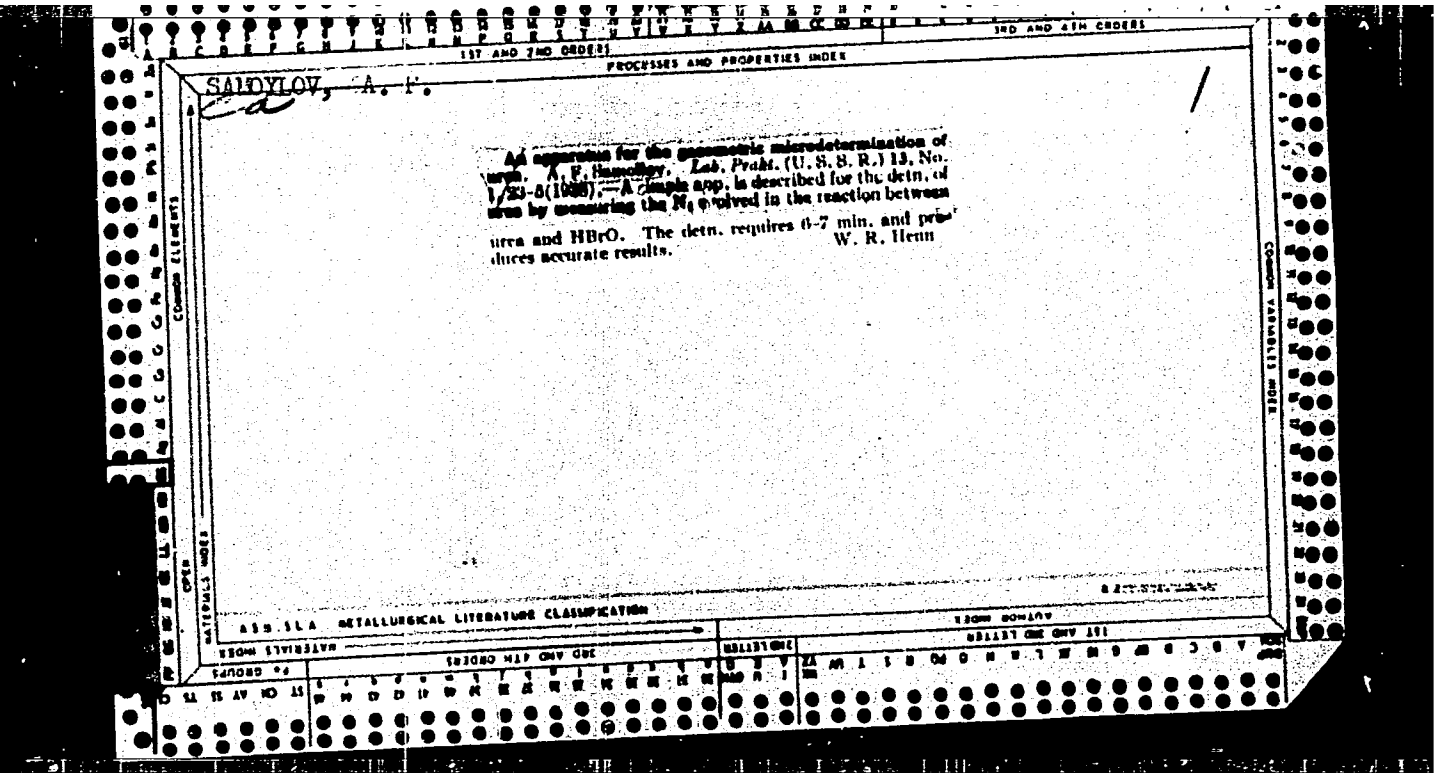
CA

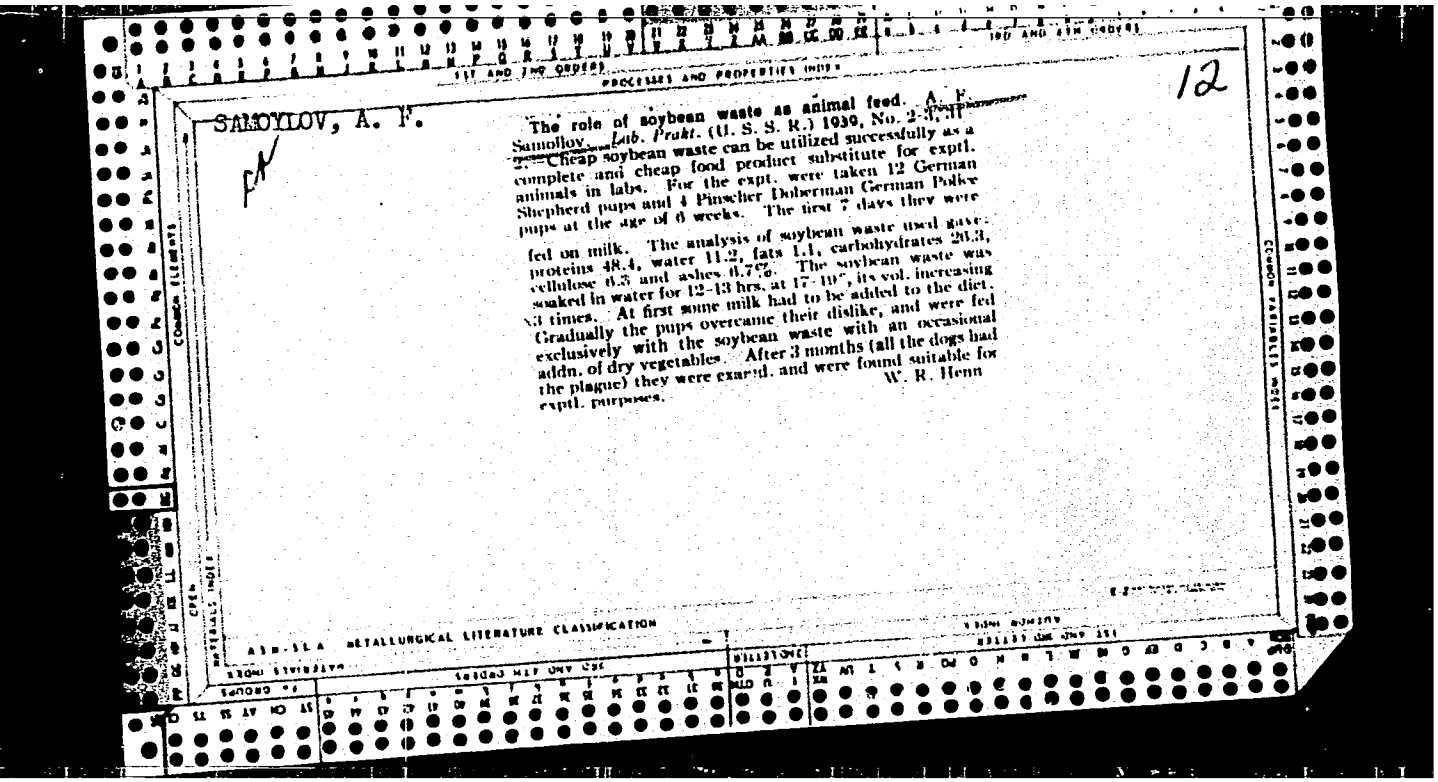
11 b

An apparatus for the gasometric microdetermination of urea. A. F. Samoilov.—*Lab. Prakt.* (U. S. S. R.) 1938, No. [illegible], 23–5.—A simple app. is illustrated and described whose principle involves measurement of the evolved N from the action of a basic soln. of Br on the liquid under investigation (urine, sweat, lymph, etc.). The detn. takes 6–7 min. Results agreed well with those obtained in the use of the app. of Krasnoyarskii and of Bourdin. In detn. of a 2% soln. of urea in 10 samples, the max. error did not exceed 0.06%. For accurate results the temp. during the expts. should be watched closely.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



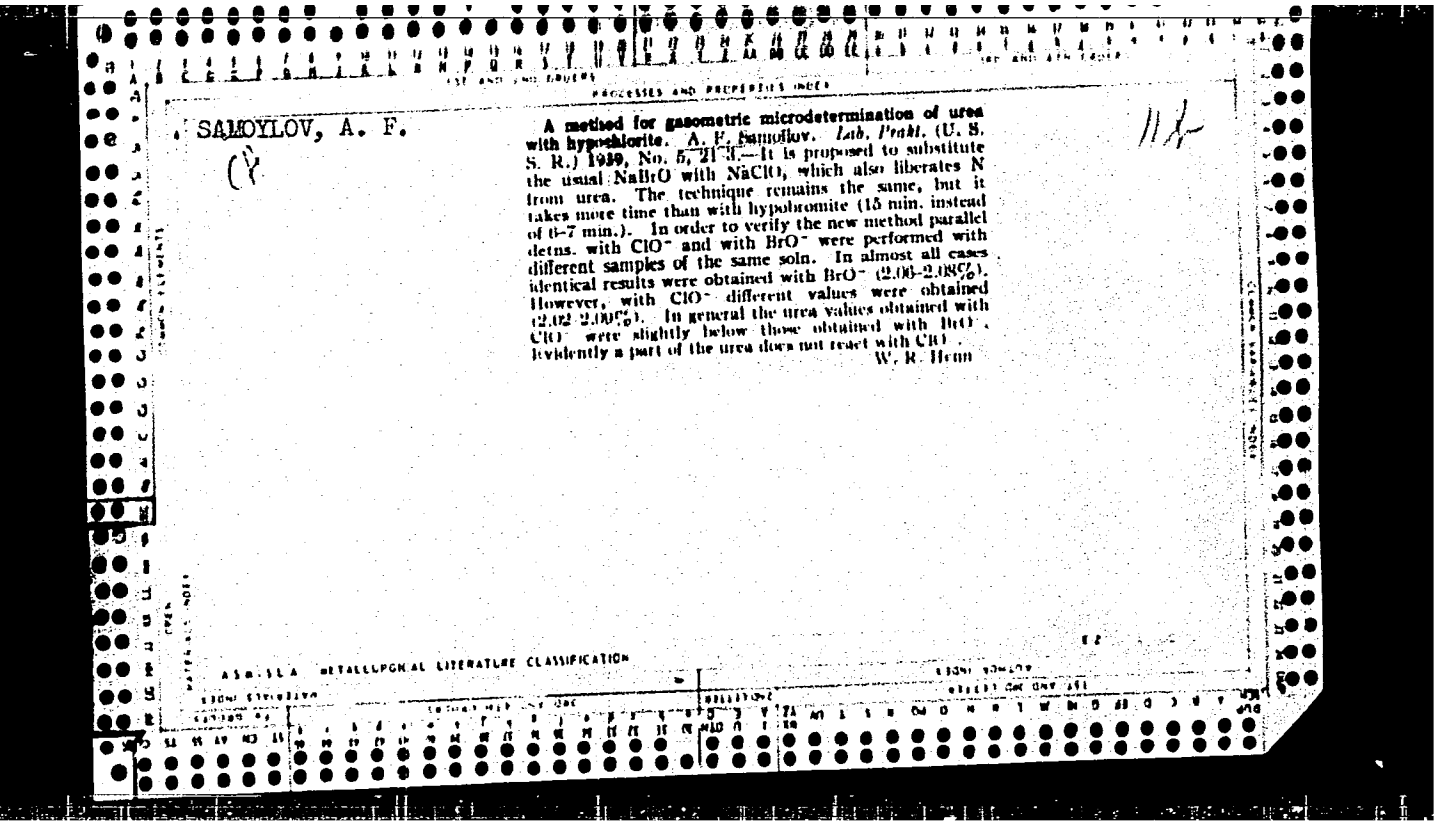


SAMOYLOV, A. F.

12

The role of soybean waste as animal feed. A. F. Samoilov. *Lab. Prakt.* (U. S. S. R.) 1939, No. 2-3, 91-2.—Cheap soybean waste can be utilized successfully as a complete and cheap food product substitute for expt. animals in labs. For the expt. were taken 12 German Shepherd pups and 4 Pinscher Doberman German Police pups at the age of 6 weeks. The first 7 days they were fed on milk. The analysis of soybean waste used gave: proteins 48.4, water 11.2, fats 1.1, carbohydrates 26.3, cellulose 6.3 and ashes 6.7%. The soybean waste was soaked in water for 12–13 hrs. at 17–19°, its vol. increasing 3 times. At first some milk had to be added to the diet. Gradually the pups overcame their dislike, and were fed exclusively with the soybean waste with an occasional addn. of dry vegetables. After 3 months (all the dogs had the plague) they were examd. and were found suitable for expt. purposes.

W. R. Henn

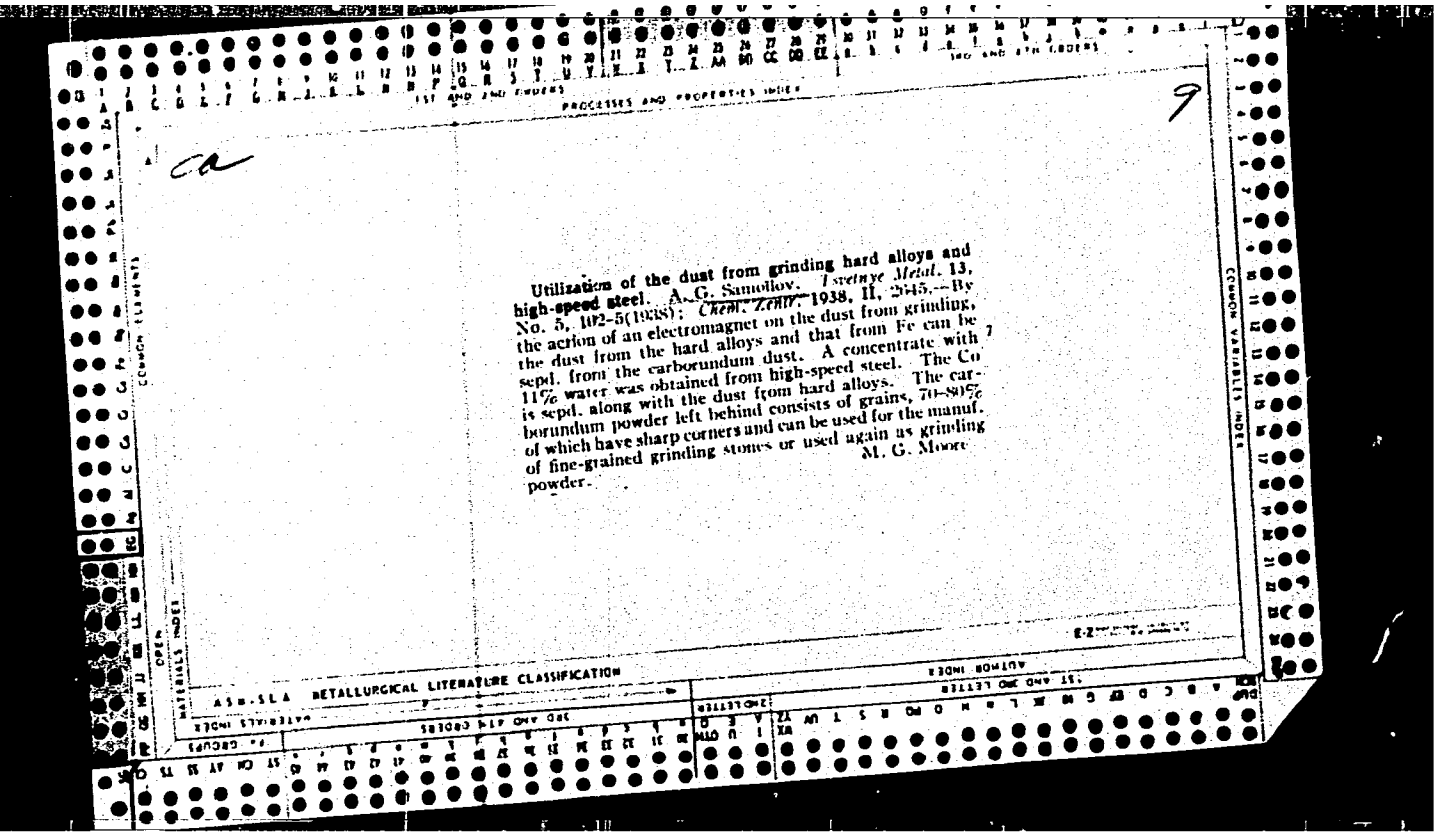


SAMOYLOV, A. F.

A method for gasometric microdetermination of urea with hypochlorite. A. F. Samoilov. *Lab. Prakt.* (U. S. S. R.) 1939, No. 5, 21–3.—It is proposed to substitute the usual NaBrO with NaClO, which also liberates N from urea. The technique remains the same, but it takes more time than with hypobromite (15 min. instead of 6–7 min.). In order to verify the new method parallel detns. with ClO^- and with BrO^- were performed with different samples of the same soln. In almost all cases identical results were obtained with BrO^- (2.00–2.08%). However, with ClO^- different values were obtained (2.02–2.09%). In general the urea values obtained with ClO^- were slightly below those obtained with BrO^-. Evidently a part of the urea does not react with ClO^-.
W. R. Henn

SAMOYLOV, A.F.

1081. Biochemical changes in the blood of calves during nuttallosis. A. F. Samojlov Trud. Turkmen. selsk. Inst., 1953, 7, 85-88; Referat. Zh. Biol., 1956, Abstr. No. 52161 (Russian)
C. C. HARHARD



Utilization of the dust from grinding hard alloys and high-speed steel. A. G. Samollov. *Tsvetnye Metal.* 13, No. 5, 102-5(1938); *Chem. Zentr.* 1938, II, 2045.—By the action of an electromagnet on the dust from grinding, the dust from the hard alloys and that from Fe can be sepd. from the carborundum dust. A concentrate with 11% water was obtained from high-speed steel. The Co is sepd. along with the dust from hard alloys. The carborundum powder left behind consists of grains, 70–80% of which have sharp corners and can be used for the manuf. of fine-grained grinding stones or used again as grinding powder.

M. G. Moore

SOV/137-58-12-24367

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 61 (USSR)

AUTHOR: Samoylov, A. G.

TITLE: Some Regularities of the Process of Powder Pressing That May be Applied in the Production of Hard Alloys (Nekotoryye zakonomernosti protsessa pressovaniya poroshkov, primenyayemykh v proizvodstve tverdykh splavov)

PERIODICAL: V sb.: Poroshkovaya metallurgiya. Nr 4. Moscow, 1956, pp 22-31

ABSTRACT: The ratio to height of sample and briquetting pressure, P_b, of the pressure on the bottom face of the sample, elastic strain, and the force of friction on ejection from the die are checked experimentally in the briquetting of specimens of hard-alloy powder mixtures 1.3 mm in diam and up to 25-30 mm in height. The difference in the unit pressures, ΔP, between the upper and the lower ends of the sample is greater than the ejection pressure, P_e. $\Delta P = P_e + KP_b$, where K is a constant depending upon the type of powder being pressed. P_e, reduced to unit side surface, is proportional to P_b. The elastic aftereffect grows with the briquetting pressure.

I. B.

Card 1/1

SAMOYLOV, A.G. (Moskva)

Regularities in the compression process of powder mixtures used in the production of hard alloys. Izv.AN SSSR.Otd.tekh.nauk no.2:159-162 F '57. (MLRA 10:5)
(Powder metallurgy)

SOV/89-5-4-4/24

AUTHORS: Kalashnikov, V. V., Titova, V. V., Sergeyev, G. Ya., Samoylov, A. G.

TITLE: On Uranium-Molybdenum Alloys in Reactor Construction (Survey) (Uran-molibdenovyye splavy v reaktorostroyenii. Obzor)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 4, pp 421-431 (USSR)

ABSTRACT: The following data on uranium-molybdenum have been compiled on the basis of mainly foreign publications.
1) Phase diagrams and the general properties of alloys.
2) The mechanical properties of some U-Mo alloys (Mo content 2,2 to 12%).
3) Measurement stability of U-Mo alloys after cyclical treatment (heating - cooling). Here especially the papers by S. T. Konobeyevskiy are mentioned.
4) Radiation-stability and corrosion-stability of U-Mo alloys in water.

The following may be said about the use of U-Mo alloys as nuclear fuel:
a) compared to pure uranium, U-Mo alloys have a higher mechanical strength, better corrosion-resisting properties at

Card 1/2

higher temperatures, and high stability of measurements also after cyclical thermal treatment.

b) The alloy is especially easily worked into rods and tubes, but less well into plates.

c) The application of U-Mo alloys forcibly leads to an increase of the degree of enrichment of U^{235}.

d) U-Mo alloys can probably be used with good success for fast reactors.

There are 7 figures, 9 tables, and 16 references, 4 of which are Soviet.

SUBMITTED: June 21, 1958

SOV/89-6-3-3/29

11(6), 21(1)
AUTHORS: Samoylov, A. G., Volkov, V. S.

TITLE: Fuel Elements for Nuclear Reactors (Teplovydelyayushchiye elementy yadernykh reaktorov)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 3, pp 261 - 276 (USSR)

ABSTRACT: This article is a survey which has been compiled on the basis of the western Geneva reports for 1958. The following reports were used in the compilation of information in the individual fields:
1)Design of fuel elements: Nr 48,74,209,263,264,792,1038,1679, 1782,1845,2380,2427.
2)Nuclear fuels: Nr 191,421,447,785,787,791,792,1017,1019, 1038,1776,1782,1801,1845,1885,1925,2372,2379.
3)Structural materials for fuel elements: Nr 44,312,314,414, 450,455,1005,1017,1054,1925,2419.
4)Fuel element production technology: Nr 240,788,1555.
5)A ten page table contains a list of fuel elements. In the compilation of this table the following articles were used: Nr 74,75,135,136,208,209,210,211,246,259,263,264,312,313,314, 414,416,421,423,447,450,455,609,610,785,787,791,792,1017,

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1038,1134,1319,1464,1523,1555,1584,1630,1673,1679,1782,1801,
1850,1885,2274,2372,2380,2419,2427,2462.
There is 1 table.

SUBMITTED: December 25, 1958

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001447010001-3"

Samoylov, A.G.

S/089/60/008/06/01/021
B006/B063 82302

21.1910

AUTHORS: Feynberg, S. M., Konobeyevskiy, S. T., Dollezhal', N. A., Yemel'yanov, I. Ya., Tsykanov, V. A., Bulkin, Yu. M., Zhirnov, A. D., Filippov, A. G., Shchipakin, O. L., Perfil'yev, V. P., Samoylov, A. G., Agoyenkov, V. I.

TITLE: The CM(SM) Research Reactor With a Capacity of 50 Mw 19

PERIODICAL: Atomnaya energiya, 1960, Vol. 8, No. 6, pp. 493-504

TEXT: The present article gives a detailed description of the Russian 50-Mw research reactor which has a neutron flux of $2.2 \cdot 10^{15}$ n/cm²sec. It is ured both for research work in nuclear physics and reactor engineering; obtaining of new transuranic elements, testing of fission and building materials under neutron and gamma bombardment, within the temperature range 20°K - 2000°C, and in various media; spectrometric examination of intermediate neutrons; examination of the gamma spectrum of the (n,γ) reaction; examination of short-lived isotopes and neutron diffraction analyses. The authors first discuss some characteristic data.

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The water-cooled, reflected reactor works with U^{235} enriched to 90%. The critical mass (without the experimental holes) is 7.3 kg of U^{235}, and including the experimental holes, it amounts to 9.5 kg (loading: ~11.7 kg). The maximum heat flow from the fuel element attains $5.5 \cdot 10^6$ kcal/m².h; the surface temperature does not exceed 195°C. Fig. 1 shows the distribution of the neutron flux in the cross section of the reactor; the flux has two maxima, one in the center of the cooling-water cavity ($2.2 \cdot 10^{15}$), and the other in the lateral reflector ($5 \cdot 10^{14}$ n/cm²sec). The flux/power ratio is $4.4 \cdot 10^{10}$ n/cm².sec.kw. With a 25% submersion depth of the fuel elements, the reactor can be in continuous operation for a period of 60-65 days. Several details are dealt with next. Experimental holes: The reactor has five horizontal and fifteen vertical holes. The horizontal ones are in the central part of the active zone, whose longitudinal and cross sections are shown in Figs. 2,3. At the output of the holes the neutron flux amounts to $\sim 3 \cdot 10^{10}$ n/cm²sec. The vertical holes are located in the reflector with the exception of the central ones. Three of them serve for obtaining transuranic elements (one of these being in the center), two low-temperature holes serve for metal

Card 2/5

tests, two high-temperature holes for the testing of fuel elements, chemical analyses of the cooling water, and corrosion tests. All of these holes are water-cooled. Furthermore, five gas-cooled holes serve for testing fission and building materials in the range of 0 - 600°C; one hole (cooled with helium gas or liquid H_2) serves for material tests at low temperatures; one gas-cooled hole for material tests at ~2000°C; one hole cooled with liquid metal (1000°C) for testing fuel elements and coolants. Construction: The following demands were made on construction: creation of a small active zone that would withstand high thermal loads for a long time, and its cooling; application of a maximum number of experimental holes (their distribution is shown in Fig. 3); possible exchange of fuel assemblies without pressure drop. Figs. 2-5 illustrate particulars of the construction. Reactor body and cover: Fig. 2 is described. The cylindrical part is made of 36 mm thick stainless steel of the grade 1Х18Н9Т (1Kh18N9T). The reflector consists basically of beryllium oxide; it is made up of blocks comprising about 65 different types, which are enclosed by steel plates on top and at the bottom. Fuel element assemblies: The element itself has the shape of a plate with a

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The CM(SM) Research Reactor With a
Capacity of 50 Mw

core, pressed from uranium oxide powder and electrolytic nickel; the core is contained in a nickel can. Fig. 6 shows a section through the assembly, Fig. 7 another through a fuel element. Data of one such element are compiled; every element contains 12.5 g U235. The cylindrical body shield (Fig. 2) divides the inner reactor cavity into two zones. The functions of this shield are briefly discussed, and the cooling water circulation is described next. The control system is described in greater detail. This system consists of two automatic regulators with two regulation rods each, four safety rods which can also be used as shim rods. The automatic regulation is operated by 13 ionization chambers located outside the reactor body; it covers the power range from 0.5 to 100%. Several details concerning safety and shim rods are thoroughly discussed. Reactor shield: Fig. 8 shows a cross section through reactor plus shield. The latter consists of steel and heavy concrete. A few details are described, and the process of fuel extraction is briefly dealt with. The cooling system is finally discussed. It consists of four closed, separate loops. The water is kept flowing by circulating pumps (500 t/h, 10 atü); the heat exchange power is 15 Mw.

Card 4/5

There are 8 figures and 1 [illegible].

SUBMITTED: March 15, 1960

Card 5/5

L 25666-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWP(t) ES/WW

ACC NR: AM6012204 Monograph UR/ 34/ 81

Samoylov, Andrey Grigor'yevich; Kashtanov, Andrey Ivanovich; Volkov, Vasiliy Semenovich

17

Nuclear reactor dispersion fuel elements (Dispersionnyye teplovydelyayushchiye elementy yadernykh reaktorov) Moscow, Atomizdat, 1965. 342 p. illus., biblio. 1650 copies printed.

TOPIC TAGS: nuclear reactor, reactor fuel element, dispersion fuel element

PURPOSE AND COVERAGE: The book is intended for physicists and reactor engineers specializing in the design of reactor fuel elements. It can also be useful for students of higher technical schools. The design of dispersion fuel elements for nuclear reactors is reviewed in detail and extensive references cited. The authors express their gratitude to Andrey Anatoliyevich Bochvar, member of the Academy of Sciences USSR, for his advice.

TABLE OF CONTENTS:

Card 1/2 UDC 621.039.54:541.18.053./.054

L 25656-66
ACC NR: AM6012204

2. Materials for fuel elements -- 48

3. Production of dispersion-type fuel elements -- 103

4. Mechanical and physical properties of dispersion compounds -- 204

5. Radiation resistance of dispersion fuel elements -- 223

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SUB CODE: 18/ SUBM DATE: 15Oct65/ ORIG REF: 013/ OTH REF: 142

Card 2/2 dda

SAMOYLOV, A.I.

Changing the system of rolling hexagonal sections. Sbor.rats. predl.vnedr.v proizv. no.5:26-27 '60. (MIRA 14:8)

1. Stalinskiy metallurgicheskiy zavod.
(Rolling (Metalwork))

SOV/126-7-1-11/28

AUTHORS: Rovinskiy, B.M., Samoylov, A.I. and Rovenskiy, G.M.

TITLE: Crystal Lattice Distortions in Nickel-Based Alloys at Temperatures of 20-500°C (Iskazheniya kristallicheskoy reshetki v splavakh na nikelevoy osnove pri temperaturakh 20-500°)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 1, pp 79-90 (USSR)

ABSTRACT: The authors used samples of pure electrolytic nickel and nickel alloyed with aluminium, chromium, cobalt and iron. The composition of these alloys is given in Table 1. The alloys were prepared in an induction furnace filled with an inert gas. The melts were subjected to homogenising annealing and were hot-forged. After forging they were again annealed at 900°C and then cold-forged in three mutually perpendicular directions in order to decrease the dimensions of crystal grains. After cutting into plane-parallel plates, the samples were again annealed at temperatures gradually increasing to 550°C (50°C higher than the temperatures later employed in X-ray studies). The crystal lattice distortions were studied by X-ray reflection at

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temperatures of 20, 200, 350 and 500°C. A KROS-1 camera with an exposure standard (Fig.1) was used. Relative integral intensities of reflections from (331) and (420) planes were found using a microphotometer MF-4. The lattice constant of nickel and nickel alloys in the region 20-500°C was determined to within ± 0.001 Å. The relative hardness of nickel and its alloys was also measured between 20 and 500°C (Fig.8). The results obtained are shown in graphs (Figs.2-11) and tables (2-4). On addition of up to 12.4 at. % of Al, 24.0 at. % of Cr, 10.4 at. % of Co and 6.7 at. % of Fe, the distortion of the nickel lattice was found to be proportional to the amount of the alloying element present. At room temperature the distortion is greatest on addition of aluminium, and least on addition of chromium. At 500°C the greatest distortion is still produced by aluminium, but the least distortion is obtained on addition of cobalt. The dependence of the characteristic temperature of alloys on the amounts of alloying elements

 is shown in Fig.5. It was found that the characteristic

Crystal Lattice Distortions in Nickel-Based Alloys at Temperatures of 20-500°C

temperature of alloys cannot be obtained by simple addition of the characteristic temperatures of their components. The state of the lattice at the absolute zero is discussed. It was found that the "zero" energy in alloys depends on the amount of the admixture and the nature of the alloying element. There are 11 figures, 4 tables and 12 references, of which 10 are Soviet, 1 English and 1 a translation from English into Russian.

ASSOCIATION: All-Union Scientific Research Institute for Aircraft Materials (Vsesoyuznyy nauchno-issledovatel'skiy institut aviatsionnykh materialov)

SUBMITTED: October 28, 1957

S/119/63/000/001/009/016
D201/D308

AUTHOR: Samoylov, A.I.

TITLE: A measuring instrument with a scale varying according to a given load

PERIODICAL: Priborostroyeniye, no. 1, 1963, 20-21

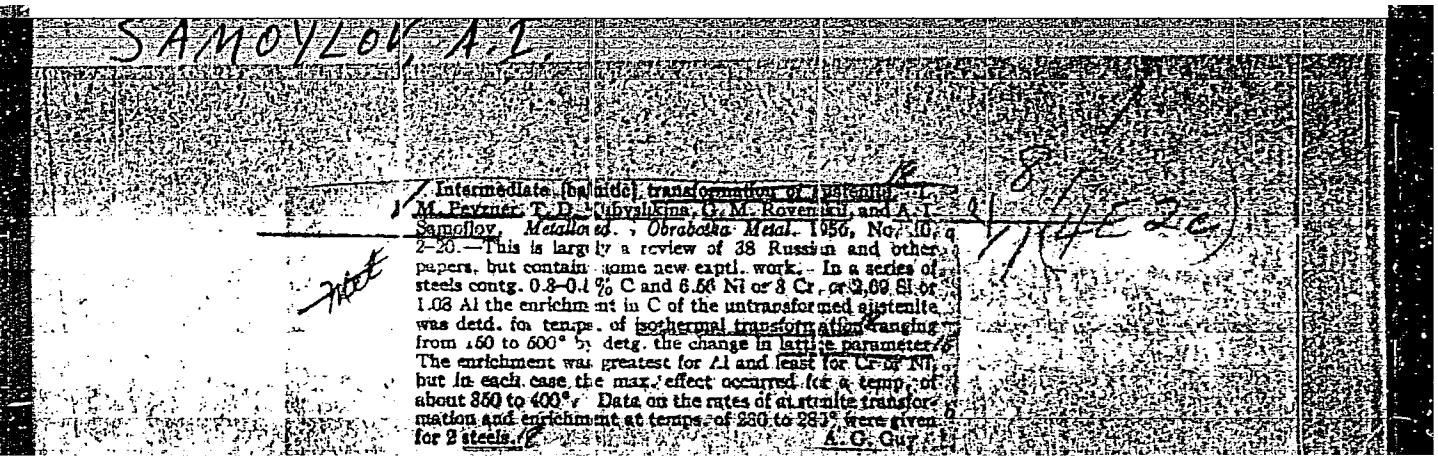
TEXT: The author considers the possibility of designing a dynamic indicating instrument having a scale which can be adjusted to obey a predetermined law. The principle of design can be applied to any instrument using mechanical opposing forces. In a dynamic instrument the frame current determines the law of change of the frame deflection angle if the specific torque is constant; a given deflection angle being reached for certain fixed initial conditions. If these initial conditions can be varied according to a predetermined law (depending on the frame current), the scale of the instrument will follow this law as well. The described effect can be achieved by a system of cams and sectors constituting the pointer support. The method of determining the required sector profile is

Card 1/2

A measuring instrument ...

given. The principle was applied to a recorder of filter attenuation characteristic in nepers. The main disadvantages of such a system are that if is mechanically complicated and can be used in high torque instruments only. There are 4 figures.

Card 2/2



SAMOYLOV, A.I.

Intermediate [bainite] transformation of austenite. L. M. Pevzner, T. D. Tsybulkina, G. M. Rovenskii, and A. I. Samoilov. *Metallov. i Obrabotka Metal.* 1956, No. 10, 2–20.—This is largely a review of 38 Russian and other papers, but contains some new exptl. work. In a series of steels contg. 0.8–0.1 % C and 6.56 Ni or 8 Cr, or 2.09 Si or 1.08 Al the enrichment in C of the untransformed austenite was detd. for temps. of isothermal transformation ranging from 460 to 600° by detg. the change in lattice parameter. The enrichment was greatest for Al and least for Cr or Ni, but in each case the max. effect occurred for a temp. of about 350 to 400°. Data on the rates of austenite transformation and enrichment at temps. of 280 to 285° were given for 2 steels. A. G. Guy

Samoylov, N.L.

ASTAPENKO, P.D., kand.geograficheskikh nauk; BURTSEV, A.I., kand.fiziko-matematicheskikh nauk; GUROV, V.P., kand.fiziko-matematicheskikh nauk; ZVEREV, A.S., kand.fiziko-matematicheskikh nauk; ZUBYAN, G.D., doktor geograficheskikh nauk; MININA, L.S., kand.geograficheskikh nauk; MOROZKIN, A.A., inzhener-meteorolog; RUPPERT, L.L., kand.geograficheskikh nauk; SERGEYEV, B.M., inzhener-meteorolog; SAMOYLOV, A.I., kand.fiziko-matematicheskikh nauk; TURKETTI, Z.L., kand.geograficheskikh nauk; CHERNOVA, V.F., starshiy nauchnyy sotrudnik; CHISTYAKOV, A.D., kand.fiziko-matematicheskikh nauk; POGOSYAN, Kh.P., prof.,red.; YASNOGORODSKAYA, M.M., red.; BRAYNINA, M.P., tekhn.red.

[Synoptic study atlas] Uchebnyi sinopticheskii atlas. Leningrad, Gidrometeor. izd-vo. Pt.2. (Sost. P.D.Astapenko i dr.) 1957. 90 fold. maps (in portfolio)__ __ __ [Practical recommendations and assignments for students using the "Synoptic study atlas" Metodicheskie rkomendatsii i zadaniia dlia studentov k "Uchebnomu sinopticheskomu atlasu," chast' 2. Sost. A.S.Zverev. 1957. 87 p. (MIRA 11:3)

1. TSentral'nyy institut prognozov (for Chernova)
(Climatology--Charts, diagrams, etc.)

83544

S/112/59/000/015/064/068
A052/A002

6.9200

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 15, p. 241, # 32657

AUTHOR: Samoylov, A.I.

TITLE: The Instantaneous Correlation Transformation and Separation of Signals by Shape

PERIODICAL: Uch. zap. Belorussk. in-ta inzh. zh.-d. transp., 1958, No. 3, pp. 241-255

TEXT: The deficiency of existing correlators consisting in a too slow calculation of the correlation function is eliminated in a device calculating the instantaneous correlation transformation. By the instantaneous correlation transformation such correlation function is meant which is determined at a rate equal to the rate at which the initial data are supplied, that is 2F number/sec, where F is the width of the incoming signal spectrum. Such correlator can be built by using a charge storage tube. The investigated signal is recorded on the target of the tube on the greater part of its circumference a-b by a beam rotating anticlockwise. On the part of the circumference b-a- the beam changes

Card 1/3

The Instantaneous Correlation Transformation and Separation of Signals by Shape

over to erasing the old record. The change-over frequency is somewhat different from the frequency of beam scanning during recording. Thus in the process of operation, the points a and b shift along the target (the distance between them being constant) with the differential frequency, securing thereby a continuous restoration of a record. After each rotation of the recording beam, it is switched over to reading at the point a (without changing the charge pattern of the target) which is performed with a by far greater speed than recording. This voltage is fed to one of the multiplier inputs. Simultaneously, with the switching-over of the beam to reading, the generator generating the signal, for which a correlation with an input action is determined, feeds a voltage to the 2nd input of the multiplier. At the l-f filter output following the multiplier, the correlation function appears continuously, whereby the speed at which it appears is equal to the speed at which the incoming signal is supplied. The correlator of the described type can be used in a transmission system with a separation of signals by shape. In this system, independent specimens of a random fluctuation noise, with a duration T and spectrum width F, serve as signal, representing the information to be transmitted. The error probability in this system is determined

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83544
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The Instantaneous Correlation Transformation and Separation of Signals by Shape

by the formula

$$P_{er \cdot pr} \cong 1 - \left[\frac{1}{2} + \Phi\left(\sqrt{\frac{ET}{m + k}}\right)\right]^n, \text{ where}$$

$$\Phi(x) = (2\pi)^{-\frac{1}{2}} \int_0^x \exp(-t^2/2)dt; \quad k = \frac{P_n}{P_s}$$

where P_n - noise power, P_s - signal power, n- number of signals used, m - number of overlapping signals. When telegraphing at a rate of 5 signs/sec and at a frequency band of 250 cycles there is an error in one letter per page of a book text even at k = 1.

B.I.K

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

AUTHOR: Samoylov, A.I. SOV/106-58-4-1/16

TITLE: Instantaneous Correlation Transformation
(Mgnovennoye korrelyatsionnoye preobrazovaniye)

PERIODICAL: Elektrosvyaz', 1958, Nr 4, pp 3 - 7 (USSR).

ABSTRACT: To describe the probability properties of communication signals, knowledge of the correlation function is necessary. Theoretical determination of this function for practical cases is generally difficult and apparatus has been developed to give experimental determination of these functions. Existing apparatus, however, produces the correlation function relatively slowly and consequently many of its valuable properties cannot be utilised. The author shows that it is possible to obtain the correlation function as rapidly as the action of the original signal applied to the input. A function so obtained he terms the instantaneous correlation function. Apparatus which will produce the instantaneous correlation function is described.
Instantaneous correlation transformation makes it possible to separate out the noise and to use the correlation function as a new signal containing the information of the original signal. Every real signal has a finite spectrum and a finite duration and by Kotel'nikov's theorem (Ref 1) such a signal can be

presented as a series of discrete values, following one on the other at a spacing of 1/2F sec., where F is the frequency bandwidth of the signal. Thus, for exact restoration of the signal, it is necessary to transmit not less than 2F numbers per sec. Since the correlation function of a periodical process has the same spectrum as the original signal, it is necessary to obtain not less than 2F points per sec. to reproduce the correlation function at the same speed as the original signal process, i.e. the time required to obtain one point of the correlation function must not be greater than 1/2F sec. But from the classical theory, the time T required to obtain one point of the correlation function is:

$$B_T(\tau) = \frac{1}{T}\int_0^T \xi(t)\xi(t+\tau)\,dt\,.$$

To reduce the time, the limits of the integration are reduced m times and to keep the value of the integral unchanged, the integrand is multiplied by m:

Instantaneous Correlation Transformation

$$B_T(\tau) = \frac{1}{T_o}\int_0^{T/m} \xi(mt)\xi(mt+\tau)\, m\,dt =$$

$$= \frac{1}{T/m}\int_0^{T/m} \xi(mt)\xi(mt+\tau)\, dt = \frac{1}{T}\int_0^{T} \xi(t)\xi(t+\tau)\, dt \qquad (1)$$

The second integral of (1) shows that apparatus can be developed which will determine one point of the correlation function over an interval of T at a time m times less than T. For this, it is necessary to multiply the argument of the correlated process by m, i.e. to write the process and then to read it at a speed m times greater, and the limits in expression (1) must be:

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$$T/m = 1/2F \quad , \qquad (2)$$

i.e. $m = 2F$ (in the author's work, m was 20).
Thus, the reading speed must be $2FT$ times greater than the writing speed.
The apparatus, which the author names the 'correlator', has the properties shown in Figure 1. The input signal $\xi(t)$ with a rate of $2F$ numbers per sec. is characterised by a frequency band F. The correlation function also with a rate of $2F$ numbers per second and the same frequency bandwidth F must be produced at the output, delayed only by a constant time C. Such a device can be constructed by using a charge storage tube such as described in Ref 2 and Ref 3.
As it is not necessary to write the signal continuously, both the reading and the writing operations can be performed by a single beam. It is sufficient to fix its values at intervals of $1/2F$ secs. and then in the free intervals the same beam can be used for reading. An electrical commutator (switch) is used to switch the beam from writing to reading. The commutator also changes the tube potentials and switches in a local oscillator, the mutual correlation of which with the original signal we wish to obtain. The local generator gives an output $\sin m \Omega t$ and maintains its initial phase.

The block diagram of the correlator is given in Figure 2. After multiplication, the output is applied to a low-frequency filter which acts as an integrator, thus giving the instantaneous correlation transformation.

The processes occurring in the correlator are illustrated in Fig. 3. The original signal $\sin \Omega t$ is written on the target by the beam at point b by a circular anti-clockwise sweep. From point b to point a, the beam is switched to erase the stale writing. From point a, the beam is switched to reading and reads the writing to point b. If the frequency of the commutation is somewhat less than the sweep frequency of the beam, then the instant the beam is switched will occur at different points on the circle of the target. Thus, the signal writing will be renewed all the time. One discrete value will be added to end b and one discrete value at end a will be erased in each revolution.

If the local generator is connected every time at point a and disconnected at point b, then the generated signal will automatically move relative to the fixed written signal by a value which is requiredfor determination of the correlation function.

Card 5/7

Figure 3 shows the signal written on the target (upper sine wave), the read signal c and the generated signal d. The beam makes one complete rotation in a quarter of a period Δt. The three lower curves are on an expanded scale. After each rotation, the beam writes from one end for a quarter of a period Δt, and, from the other end, erases for a quarter of a period (the dotted line), and the remaining part of the writing (five periods) is read. This read signal (Curve c) is multiplied with the local signal (Curve d) in the multiplier and the signal obtained e is applied to the filter. The average value is obtained at the output of the filter.

It can be shown that the described circuit gives at the output a value of the integral:

$$\frac{1}{T/m} \int_0^{T/m} \sin m\Omega t \sin \Omega(mt + \tau) \, dt ,$$

Card6/7

which is the instantaneous correlation transformation of the original signal $\sin\Omega t$.
There are 3 figures and 3 references, 1 of which is Soviet, 1 German and 1 English.

SUBMITTED: June 17, 1957

Card 7/7 1. Radio signals---Theory 2. Radio signals--Testing equipment
3. Radio signals---Properties 4. Mathematics--Applications

SOV/142-58-5-10/23

9(9)
AUTHOR: Samoylov, A.I.

TITLE: Separation of Signals by Their Form

PERIODICAL: Izvestiya vyasshikh uchebnykh zavedeniy - radiotekhnika, 1958, Nr 5, pp 584-588 (USSR)

ABSTRACT: The author discusses signals which differ by their form in the strict sense. A signal of a given power can still have different forms. Therefore, it is impossible to generalize about signals of all forms. One has to work with sufficient precision. The author gives an example of a communication transfer system with separation of signals by form. The formula for estimating the disturbance stability of the signal separating system by their forms:

$$P(\text{osh.pr}) < n\left[1/2 - \Phi\left(\sqrt{\frac{PT}{n+k}}\right)\right]_3 \quad \Phi(X) = \frac{1}{\sqrt{2\pi}}\int e^{-\frac{t^2}{2}}dt; \quad k = \frac{P_{nl}}{P_c}$$

and P(osh.pr.) is the probability of the error reception (equation (7)). Systems which separate signals by form have proved to be optimum systems, concerning accidental samples of fluctuating noise and disturbance stability. In this respect, they appear

Card 1/2

SAMOYLOV, A.I., aspirant

General principles of the theory of distinguishing signals by their form. Sbor. LIIZHT no.158:336-351 '58. (MIRA 11:6)
(Information theory)

SAMOYLOV, A.I., aspirant

Machine used for instantaneous correlation transformation of functions. Sbor. LIIZHT no.158:352-367 '58. (MIRA 11:6)
(Mathematical instruments)

SAMOYLOV, A.I.

Some properties of correlation functions. Trudy Ural. elektromekh. inst. inzh. zhel. dor. transp. no.8:35-57 '63.

Generality of an ideal receiver according to Kotel'nikov and an ideal receiver according to Kharkevich. Ibid.:68-79

Comparison of the noiseproof features of a correlator and a storage device receiving pulse signals with fluctuation noise background. Ibid.:80-92 (MIRA 18:7)

FROLOV, Vladimir Alekseyevich; SAMOYLOV, A.I., otv. red.; RUSAKOVA, G.Ya., red.; ALEKSEYEV, A.G., tekhn. red.; BRAYNINA, M.I., tekhn.red.

[Delving into the secrets of the weather]Vtorzhenie v tainy pogody. Leningrad, Gidrometeoizdat, 1962. 61 p. (MIRA 15:11)

(Meteorology)

ASTAPENKO, P.D.; BEL'SKAYA, N.N.; BUSHUK, V.I.; BUSHUK, O.A.; GUROV, V.P.; ZUBYAN, G.D.; KATS, A.L.; MININA, L.S.; MOROZKIN, A.A.; PAVLOVSKAYA, A.A.; POGOSYAN, Kh.P.; SAMOYLOV, A.I.; SMIRNOV, P.I.; TARAKANOV, G.G.; TURKETTI, Z.L.; CHERNOVA, V.F.; CHISTYAKOV, A.D.

[Synoptic atlas for schools]Uchebnyi sinopticheskii atlas. Pod red. Kh.P.Pogosiana. 3, perer. i dop. izd. Leningrad, Gidrometeoizdat, 1962. 217 gold.col.maps. (MIRA 16:3)

___[Assignments for students]Zadaniia dlia uchashchikhsia. Pod red.Kh.P.Pogosiana. 138 p. ___[Methodological instructions and recommendations for teachers]Metodicheskie ukazaniia i rekomendatsii dlia prepodavatelei. Pod red. Kh.P.Pogosiana. 73 p.

(Meteorology--Charts, diagrams, etc.)

SAMOYLOV, A.I., inzh.

Measuring instrument with a scale changing according to a previously given rule. Prioborostroenie no.1:20-21 Ja '63. (MIRA 16:2)

(Electric instruments)

USPENSKIY, B.D., doktor fiz.-mat. nauk, prof.; BELOUSOV, S.L., kand. fiz.-mat. nauk; PYATYGINA, K.V.; YUDIN, M.I.; MERTSALOV, A.N., kand. fiz.-mat. nauk; DAVYDOVA, O.A.; KUPYANSKAYA, A.P.; PETRICHENKO, I.A.; MORSKOY, G.I.; TOMASHEVICH, L.V.; SAMOYLOV, A.I.; ORLOVA, Ye.I.; DZHORDZHIO, V.A.; PETRENKO, N.V.; DUBOVYY, A.S.; ROMOV, A.I.; PETROSYANTS, M.A.; GLAZOVAYA, [illegible]; BATYAYEVA, T.F.; BEL'SKAYA, N.N.; CHISTYAKOV, A.D.; GANDIN, L.S.; BURTSEV, A.I.; MERTSALOV, A.N.; BAGROVYY, N.A.; BELOV, P.I.; ZVEREV, A.S., retsenzent; SIDENKO, G.V., red.; [illegible] red.; DUBENTSOV, V.R., kand. fiz.-mat. nauk, nauchn. red.; SAGATOVSKIY, N.V., red.; BUGAYEV, V.A., doktor geogr. nauk, prof., red.; ROGOVSKAYA, Ye.G., red.

[Manual on short-range weather forecasts] Rukovodstvo po kratkosrochnym prognozam pogody. Leningrad, Gidrometeoizdat. Pt.1. Izd.2., perer. i dop. 1964. 519 p. (MIRA 18:1)

1. Moscow. TSentral'nyy institut prognozov.

L 01811-66 EWT(d)/FSS-2/EEC-4/EED-2

ACCESSION NR: AP5020886 UR/0106/65/000/008/0039/0046
621.391.16:681.142.5

AUTHOR: Samoylov, A. I. 55

TITLE: Electronic correlator for separation of signals according to shape 6,55

SOURCE: Elektrosvyaz', no. 8, 1965, 39-46

TOPIC TAGS: signal correlation, signal detection, electronic signal, signal processing, signal shape

ABSTRACT: This is a continuation of the author's investigation (Elektrosvyaz', 1958, no. 4) of a continuous correlator which calculates the correlation function according to the approximate formula:

$$B(\tau)=\lim_{T\to\infty}\frac{1}{T}\int_0^T \xi(t)\xi(t+\tau)\,dt\approx B_T(\tau)=\frac{1}{T}\int_0^T \xi(t)\xi(t+\tau)\,dt$$

where $\xi(t)$ is the rate of arrival of the signal. The correlator comprises a storage section with a capacity equal to or exceeding the number of degrees of freedom of the signal, an electronic switch, sig-

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ACCESSION NR: AP5020886

nal generator, a multiplying circuit, and an integrating (averaging) circuit. A master-pulse generator controls the correlator operation. According to the formulas and curves given in the article, the probability of false reception (noise immunity) per one degree of freedom will be under 7×10^{-3}, 1×10^{-5}, and 2×10^{-11} for 2FT = 50, 100, and 200, respectively, where F is the signal-spectrum width and T is the signal duration. In an experimental study, a cross-correlation function was produced between these two sums: 1) a square pulse, plus a first-order infinitesimal a-c component, plus a second-order infinitesimal a-c component and 2) an identical square pulse, plus a first-order infinitesimal a-c component noncorrelated to its counterpart in the first sum, plus a second-order infinitesimal a-c component correlated to its counterpart in the first sum. "In conclusion, the author wishes to thank V. V. Orlov for his help in the experimental work." Orig. art. has: 4 figures and 5 formulas. [03]

ASSOCIATION: none

SUBMITTED: 19Oct64 ENCL: 00 SUB CODE: EC

NO REF SOV: 011 OTHER: 001 ATD PRESS: 4086

Card 2/2

ACC NR: AT7006725 SOURCE CODE: UR/2546/66/000/158/0025/0034

AUTHOR: Samoylov, A. I.

ORG: none

TITLE: The occlusion of cyclones

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy. no. 158, 1966. Sinopticheskaya meteorologiya (Synoptic meteorology), 25-34

TOPIC TAGS: cyclone, atmospheric front, air temperature

ABSTRACT: The relation of occluded fronts and thermal ridges to height has been examined. Observations show that occlusion takes place only in the lower layers of the air. It was not once detected at the 850-millibar level. Thermal ridges form with development of each cyclone, whether occlusion of the cyclone takes place or not. Development of these ridges is determined by advection and rising air currents as a result of unsteady air flow. Decline in horizontal temperature gradients at the edge of the ridge and increase in gradient at the base, giving the ridge the form characteristic of occluded fronts, are caused by ascending air movement. The transfer of heat to the upper levels takes place with a velocity approaching the wind velocity. This transfer velocity is generally greater than the rate of frontal movement on the earth's surface. The thermal ridge tends to form before occlusion begins, and may be shifted forward relative to the occluded front at the earth's surface. The author

Card 1/2

ACC NR: AT7006725

concludes that development of a thermal ridge at some height does not depend on occlusion. The two phenomena may occur together, often do, but by no means always occur together. Orig. art. has: 4 figures and 3 tables.

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2

ACC NR: AT7006725 SOURCE CODE: UR/2546/66/000/158/0035/0045

AUTHOR: Samoylov, A. I.

ORG: nono

TITLE: Destruction of the thermal structure of fronts in cyclones

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy. no. 158, 1966. Sinopticheskaya meteorologiya (Synoptic meteorology), 35-45

TOPIC TAGS: cyclone, atmospheric front, wind velocity, atmospheric pressure

ABSTRACT: On pressure charts showing the 850-, 700-, 500-, and 300-millibar levels, the positions of the warm and cold boundaries of frontal zones in cyclones have been examined in relation to the frontal line on the earth's surface, the slope of the boundaries, the change in width of the frontal zone with height, and the temperature contrast at the different pressure levels. The boundaries of the frontal zone have been taken as the isotherms beyond which the horizontal temperature gradient is half (or less) its value within the frontal zone. When the general slope of the frontal zone in the troposphere is toward the cold air, the boundary by no means everywhere slopes in this direction. Within individual layers of the troposphere each boundary will almost always be found to have slopes both toward the cold air and toward the warm air, and the cold and warm boundaries generally slope in opposite directions.

Card 1/2

SAMOYLOV, A.M.; KHARIN, I.V.

Experience with non-ferrous casting. Lit.proizv. no.8:28-29 N '54.
(Founding) (MLRA 8:1)

REMPEL', S.I.; SAMOYLOV, A.M.

Automatic measurement and regulation of liquid levels by using radioactive tracers. TSvet. met. 29 no.7:83-84 Jl '56. (MLRA 9:10)

(Radioactive tracers--Industrial applications)
(Autoclaves)

SAMOYLOV, A.N.

SAMOYLOV, A.N.; KHARIN, I.V.

Nonferrous foundry practice. Lit.proizv. no.1:27 Ja '55.
(Founding) (Die casting) (MLRA 8:3)

SAMOYLOV, A.N.; KHARIN, I.V.

Cooling fins for the detachable parts of a chill mold. Lit. proizv. no.4:27 Ap '55. (MLRA 8:6)
(Molding(Founding))

SAMOYLOV, A.N.; ANDRYUSHCHENKO, P.V.

Revitalization of sunflower varieties in the area of the Armavir Oil and Fat Combine. Masl.-zhir. prom. 24 no.12:37-38 '58. (MIRA 11:12)

1.Armavirskiy maslozavod.
(Krasnodar Territory--Sunflower)

SAMOYLOV, A.N., inzh.; VISHNEVETSKAYA, E.I.

Economic efficiency of the ND-1250 extraction unit. Masl.-zhir. prom. 27 no.6:39-40 Je '61. (MIRA 14:6)

1. Armavirskiy maslozhirovoy kombinat.
(Armavir--Extraction apparatus)

L 8329-66 EWT(d)/FSS-2

ACC NR: AT5028040 SOURCE CODE: UR/3173/63/000/008/0080/0092

53

BH

AUTHOR: Samoylov, A. O. (Senior lecturer)

ORG: Ural Electromechanical Institute of Railroad Transportation Engineers (Ural'skiy elektromekhanicheskiy institut inzhenerov zheleznodorozhnogo transporta)

TITLE: A comparison of the interference stability of a correlator and an accumulator during pulsed signal reception with a background of fluctuation interferences

SOURCE: Sverdlovsk. Ural'skiy elektromekhanicheskiy institut inzhenerov zheleznodorozhnogo transporta. Trudy. no. 8, 1963. Voprosy avtomatiki, telemekhaniki i svyazi na zheleznodoroshnom transporte (Problems in automation, remote control, and communication in railroad transportation), 80-92.

TOPIC TAGS: Signal correlation, signal interference, interference measurement, pulse signal

ABSTRACT: The author estimates the interference stability of a correlator and compares it with the interference stability of accumulators. He discusses the correlator reception of a pulsed periodic signal, the probability of incorrect reception, and a comparative estimate of correlator and accumulator operation which shows that the correlator interference stability is (other conditions being equal) higher than the accumulator stability. The calculated

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L 8329-66

ACC NR: AT5028040

0

interference stability for real systems is, however, still lower than the potential reception limit indicated by the Kotel'nikov theorem. Orig. art. has: 40 formulas and 1 figure.

SUB CODE: GP, EC, MA / SUBM DATE: none / ORIG REF: 006 / OTH REF: 007

jw

Card 2/2

SAMOYLOV, A.P., kand.med.nauk (Krivoy Rog)

Pathogenesis of pyorrhea alveolaris. Vrach. delo no.12:133-134 D '60. (MIRA 14:1)

(GUMS--DISEASES)

PAP, A.G., kand. med. nauk; SAMOYLOV, A.P.

Toxoplasmosis in hemorrhages during pregnancy and labor.
Akush. i gin. 39 no.3:62-64 My-Je'63 (MIRA 17:2)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta okhrany materinstva i detstva imeni Prof. P.M. Buyko (direktor A.G. Pap).

SAMOYLOV, A.P.

SAMOYLOV, A.P., kand.med.nauk

Pyorrhea alveolaris and denticles. Vrach.delo supplement '57:52-53 (MIRA 11:3)

1. Kafedra patoanatomii (zav.-prof. I.M.Peysakhovich) Kiyevskogo meditsinskogo stomatologicheskogo instituta.
(GUMS--DISEASES) (TEETH--DISEASES)

SAMOYLOV, A.P.

USSR/Human and Animal Morphology ▲ Digestive System Q-3

Abs Jour : Referat Zhur - Biologii, No 16, 1957, 70297

Author : Samoylov, A.P.
Title : The Composition of the Hard Tissues of Teeth (Dentin and Cement) in Amphodontosis.

Orig Pub : Vracheb. delo, 1955, No 8, 773-774

Abstract : No abstract.

Card 1/1 - 51 -

SAMOYLOV, A.P. (Kiyev)

Role of denticles in parodontitis. Stomatologiia 35 no.4:58 Jl-Ag '56 (MLRA 10:4)

(GUMS--DISEASES) (TEETH--DISEASES)

SAMOYLOV, A.P., kand.med.nauk (Kiyev)

Condition of the pulp in paradentosis. Probl.stom. 4:133-138 '58. (MIRA 13:6)

(GUMS--DISEASES) (TEETH)

BABOV, D.M., SAMOYLOV, A.P., SHEVCHENKO, A.M.

Conference on the problem "Silicosis and its control", devoted to the 40th anniversary of the Ukrainina S.S.R. Gig. truda i prof. zab. 2 no.6:70-71 N-D '58 (MIRA 11:12)
(LUNGS--DUST DISEASES)

SAMOYLOV, A.P., kand.med.nauk

Fixation, labeling, and shipping biopsy material for pathological examination. Med.sestra 17 no.11:28-30 N'58 (MIRA 11:11)

1. Zaveduyushchiy patogistologicheskoy laboratoriey, Krivorozhskogo nauchno-issledovatel'skogo instituta gigiyeny truda i profzabolevaniy.
(ANATOMICAL SPECIMENS)
(BIOPSY)

SAMOYLOV, A. P. (Krivoy Rog)

Morphological changes in the lungs caused by iron ore dust. Gig. truda i prof. zab. no.3:45-48 '62. (MIRA 15:4)

1. Krivorozhskiy nauchno-issledovatel'skiy institut gigiyeny truda i profzabolevaniy.

(LUNGS—DUST DISEASES) (IRON ORES—TOXICOLOGY)

PAP, O.G. [Pap, O.H.]; SAMOYLOV, A.P. [Samoilov, A.P.]

Toxoplasmosis in obstetrical hemorrhages. Ped.,akush. i gin. 24 no.1:61-63'62. (MIRA 16:8)

1. Laboratoriya toksoplazmozu ta listerel'ozu (zav. - A.P. Samoylov) Kiivs'kogo institutu okhoroni materinstva y ditinstva (direktor - O.G.Pap [Pap, O.H.]).
(TOXOPLASMOSIS) (HEMORRHAGE, URERINE)

GRADOV, G.A.; KALININA, G.F.; MODEL', A.M.; NEVRAYEV, G.A.; SAMOYLOV, A.V.[deceased]; SVIRSKIY, V.A.; KOSITSKIY, Ya.V., kand. srkhit., nauchnyy red.; MANIKOV, M.Ye., kand. med. nauk, nauchnyy red.; MOROZOVA, G.V., red.; BRUSINA, L.N., tekhn. red.

[Sanatoriums and rest homes; manual on designing] Sanatorii i doma otdykha; posobie po proektirovaniiu. Moskva, Gosstroiizdat, 1962. 223 p. (MIRA 15:7)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut obshchestvennykh zdanii i sooruzhenii.
(Sanatoriums) (Labor rest homes)

SOV/120-59-1-9/50

AUTHORS: Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Samoylov, A. V.

TITLE: Determination of the Masses and Momenta of Charged Particles from Multiple Scattering in a Propane Bubble Chamber.

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 1, pp 44-47 and 1 plate (USSR)

ABSTRACT: 246 photographs of particle tracks which came to rest in the bubble chamber (Ref.2) were examined. The tracks were analyzed by measuring the multiple scattering by the chord method suggested by Goldschmidt-Clermont et al (Ref.1). To determine the masses the formula given by Olbert et al (Ref. 1) was employed. The following results were obtained:

$m = (268 \pm 23)m_e$	$t = 2$ cm	312 angles
$m = (263 \pm 37)m_e$	$t = 1$ cm	132 angles
$m_\mu = (196 \pm 25)m_e$	$t = 1$ cm	132 angles
$m_p = (1973 \pm 184)m_e$	$t = 2$ cm	288 angles

To determine the momenta Olbert's formulae were used (Ref.1)

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SOV/120-59-1-9/50

Determination of the Masses and Momenta of Charged Particles from Multiple Scattering in a Propane Bubble Chamber

and it was shown that in order to determine the momenta of mesons to 15% at 100 Mev, 25 cm of track in propane is sufficient, while for 200 Mev protons the track length is 50 cm. There are 4 tables, 2 figures and 4 references, of which 2 are Soviet and 2 English.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, Academy of Sciences USSR)

SUBMITTED: February 12, 1958.

Card 2/2

ALIKHANYAN, A.I.; KIRILLOV-UGRYUMOV, V.G.; KOTENKO, L.P.; KUZNETSOV, Ye.P.; SAMOYLOV, A.V.

Single scattering of 10 to 30 Mev. μ^--mesons on carbon. Zhur.eksp.i teor.fiz. 38 no.2:387-393 F '60. (MIRA 14:5)

1. Fizicheskiy institut im. P.N.Lebedeva Akademii nauk SSSR.
(Mesons—Scattering)

KIRILLOV-UGRYUMOV, V.G.; KROPIN, A.A.; ROGANOV, V.S.; SAMOYLOV, A.V.

Angular and energy dispersion of π^--mesons in a scattered magnetic field of a six-meter synchrocyclotron. Atom. energ. 11 no.3: 245-246 S '61. (MIRA 14:9)
(Mesons--Scattering) (Synchrotron) (Magnetic Fields)

SAMOYLOV, A. V.

95

S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inshenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fivegskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionization losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadze, h-f conductivity of suboritical plasma;

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S/089/62/013/006/019/027
B102/B186

Nauchnaya konferentsiya...

Ye. Ye. Lovetskiy, A. A. Rukhadze, electromagnetic waves in nonhomogeneous plasma; Yu. D. Kotov, I. L. Rozental', the origin of fast cosmic muons; Yu. M. Ivanov, muon depolarization in solids; V. G. Varlamov, Yu. M. Grashin, B. A. Dolgoshein, V. G. Kirillov-Ugryumov, V. S. Roganov, A. V. Samoylov, μ^- capture by various nuclei; V. S. Demidov, V. G. Kirillov-Ugryumov, A. K. Ponosov, V. P. Protasov, F. M. Sergeyev, scattering of π^- mesons at 5 - 15 Mev in a propane bubble chamber; S. Ya. Nikitin, M. S. Aynutdinov, Ya. M. Selektor, S. M. Zombkovskiy, A. F. Grashin, muon production in π^-p interactions; B. A. Dolgoshein, spark chambers; N. G. Volkov, V. K. Lyapidevskiy, I. M. Obodovskiy, study of operation of a convection chamber; K. G. Finogenov, production of square voltage pulses of high amplitudes; G. N. Aleksakov, problems of color vision; V. K. Lyapidevskiy, relation between number of receivers and number of independent colors; Ye. M. Kudryavtsev, N. N. Sobolev, N. I. Tisengauzen, L. N. Tunitskiy, F. S. Fayzulov, determination of the moment of electron transition of oscillator forces and the widths of the Schuhman-Runge bands of molecular oxygen; B. Ye. Gavrilov, A. V. Zharikov, V. I. Rayko, decomposition of the volume charge of intense ion beams; Ye. A. Kramer-Agayev, V. S. Troshin, measurement of neutron spectra; G. G. Doroshenko, new methods of fast-neutron recording; V. I. Ivanov, dosimetry terminology; R. M. Voronkov,

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(2)

ACCESSION NR: AP3002719 S/0120/63/000/003/0055/0057

AUTHOR: Bobrov, V. D.; Varlamov, V. G.; Grashin, Yu. M.; Dolgoshein, B. A.; Kirillov-Ugryumov, V. G.; Roganov, V. S.; Samoylov, A. V.

TITLE: Use of threshold Cerenkov counter for separation of μ- and π-mesons in meson beams

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1963, 55-57

TOPIC TAGS: μ-meson separation, threshold Cerenkov counter

ABSTRACT: A Cerenkov counter has been used for the separation of μ- and π-mesons. The counter consists of a 100-mm cube of polished organic glass 2 mm thick filled with distilled water containing 2-aminonaphthalene-6, 8-disulfonic acid, which serves as the spectrum transformer. This cube is placed inside another cube with walls 4 mm thick. The space of 3 mm between the cubes is filled with MgO powder. Two FEY-33 photomultipliers connected to a common load are in optical contact with the water radiator. The radiator

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ACCESSION NR: AP3002719

and the photomultiplier are enclosed in a steel casing with foil windows for particle passage. A block diagram of the arrangement is shown in Fig. 1 of the Enclosure. A 260-Mev/sec pulsed meson beam was used in experiment. Resolution time of the coincidence circuits is 5—6 nanosec, and the efficiency of anticoincidence, 99.93%. It was found that the use of the Cerenkov counter makes it possible to reduce the contents of π-mesons in a μ-meson beam by a factor of 10. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 25Jun62 DATE ACQ: 12Jul63 ENCL: 01

SUB CODE: 00 NO REF SOV: 001 OTHER: 001

Card 2/3

ACCESSION NR: AF3002719

ENCLOSURE: 01

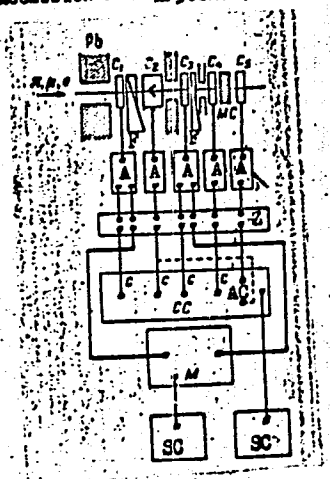

Fig. 1. Location of counters and block diagram of electronic circuit

Pb - 70 x 70 mm lead collimator; C_1 and C_5 - scintillation counters with Φ 100 x 10 mm plastic scintillators; C_4 - Φ 80 x 3 mm; C_3 - Φ 200 x 10 mm; C_2 - Cerenkov counter; F_1 and F_2 - variable thickness filters; Mc - 3 gr/cm² carbon target; A_1 through A_5 - amplifiers with gain of 5; 3 - variable delay lines; CC - coincidence and anticoincidence circuits; C - coincidence inputs; AC - anticoincidence inputs; M - coincidence monitoring circuit; SC - scaler circuit.

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L 14984-63 EWT(d)/BDS ASD/ESD-3/APGC Pg-4/Pk-4/Po-4/Pq-4
IJP(C)

ACCESSION NR: AP3004891 S/0120/63/000/004/0063/0066

AUTHOR: Varlamov, V. G.; Grashin, Yu. M.; Dolgoshein, B. A.; Samoylov, A. V.

TITLE: Multichannel coincidence-anticoincidence circuit

SOURCE: Pribory* i tekhnika eksperimenta, no. 4, 1963, 63-66

TOPIC TAGS: multichannel coincidence-anticoincidence circuit, coincidence-anti-coincidence circuit, scintillation counter, particle recording efficiency, coincidence-circuit dead time, coincidence-pulse rise time

ABSTRACT: The coincidence-anticoincidence circuit shown in Fig. 1 of Enclosure has four coincidence and two anticoincidence channels. The coincidence circuits are switched on by corresponding tumblers. The input pulses are negative with an amplitude of 2 v or higher. The plate current of each coincidence tube (L_1 to L_4) is 20 μamp. The current flowing along the separating diode D_3 is 15 μamp. The voltage of D_3 is 0.5 v with one open tube and 0.7 v with four open tubes; consequently, with incomplete coincidence the maximum pulse amplitude for D_3 is 0.2 v. The coincidence pulses separated at D_3 are amplified by the wide-band stage of tube L_5. Diode D_5 discriminates the incomplete coincidences, which then have an amplitude of 1 v or higher. Discrimination reduces the current of L_6 by

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L 14984-63
ACCESSION NR: AP3004891

approximately 70 to 80%. Four scintillation counters whose scintillators were 100 mm in diameter and 10 mm thick were used to test the circuit. FEU-3 photomultipliers were in optical contact with the counters, the signals of each of which were shaped and amplified by a wide-band two-stage amplifier. Experimental results show that the following: 1) at a time resolution of 5 to 8 nanosec, the efficiency of particle recording in four-cycle coincidences is not lower than 99%; 2) the efficiency of particle anticoincidence recording is 99.95 ±0.01%; 3) coincidence circuit dead time is about 30 nanosec; and 4) output-pulse rise time of the coincidence circuit is less than 10 nanosec. Orig. art. has: 5 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 00 DATE ACQ: 28Aug63 ENCL: 01

SUB CODE: GE, SD NO REF SOV: 000 OTHER: 001

Card 2/3 2

NEKRASOV, M.M.; SAMOYLOV, A.V.

Electrostriction devices for producing minor mechanical displacements. Avtom. i prib. no.4:81-84 O-D '63. (MIRA 16:12)

1. Kiyevskiy politekhnicheskiy institut.

SAMOYLOV, A.V., inzh.

Prevention of wire damage in simultaneous drawing and annealing.
Energ. i elektrotekh. prom. no.2:58-59 Ap-Je '64. (MIRA 17:10)

MISHCHENKO, M.I.; KOVAL'CHUK, V.A.; SAMOYLOV, A.V.; YEZHOVA, T.I.
[IEzhova, T.I.]

Apparatus for studying the movements of polymers and heat transfer in screw presses. Khim.prom.[Ukr.] no.1:33-35 Ja-Mr '65. (MIRA 18:4)

L 36951-66 EWT(m)/T/EWP(j) IJP(c) RM/WW

ACC NR: AT6017660 (A) SOURCE CODE: UR/3162/65/000/002/0177/0179

AUTHOR: Samoylov, A. V. (Engineer); Mishchenko, M. I. (Engineer)

ORG: none

TITLE: Instrument for measuring the thermophysical characteristics of polymers in a wide temperature range

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya. Khimicheskoye mashinostroyeniye, no. 2, 1965. Protsessy, mashiny, apparaty i avtomatizatsiya khimicheskikh proizvodstv (Processes, machines, apparatus and automation of chemical plants), 177-179

TOPIC TAGS: measuring device, heat source / PE-500 polyethylene

ABSTRACT: The device (designed by the authors) was used to measure the thermophysical characteristics of PE-500 polyethylene in the temperature range 20-160°C. The device was designed in view of the fact that existing devices measure thermophysical characteristics of various polymers *below* the polymer's melting point. The device (which makes use of a spiral source for heating the test materials) measures heat conductivity, heat capacity and density simultaneously. The latter characteristics are analyzed and their temperature dependence in the case of polyethylene is plotted. The test results agree

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L 36951-66

ACC NR: AT6017660

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well with data from other methods. The device is based on a heat source method developed by M. V. Kulakov. Orig. art. has: 1 figure.

SUB CODE: 07,14/ SUBM DATE: none

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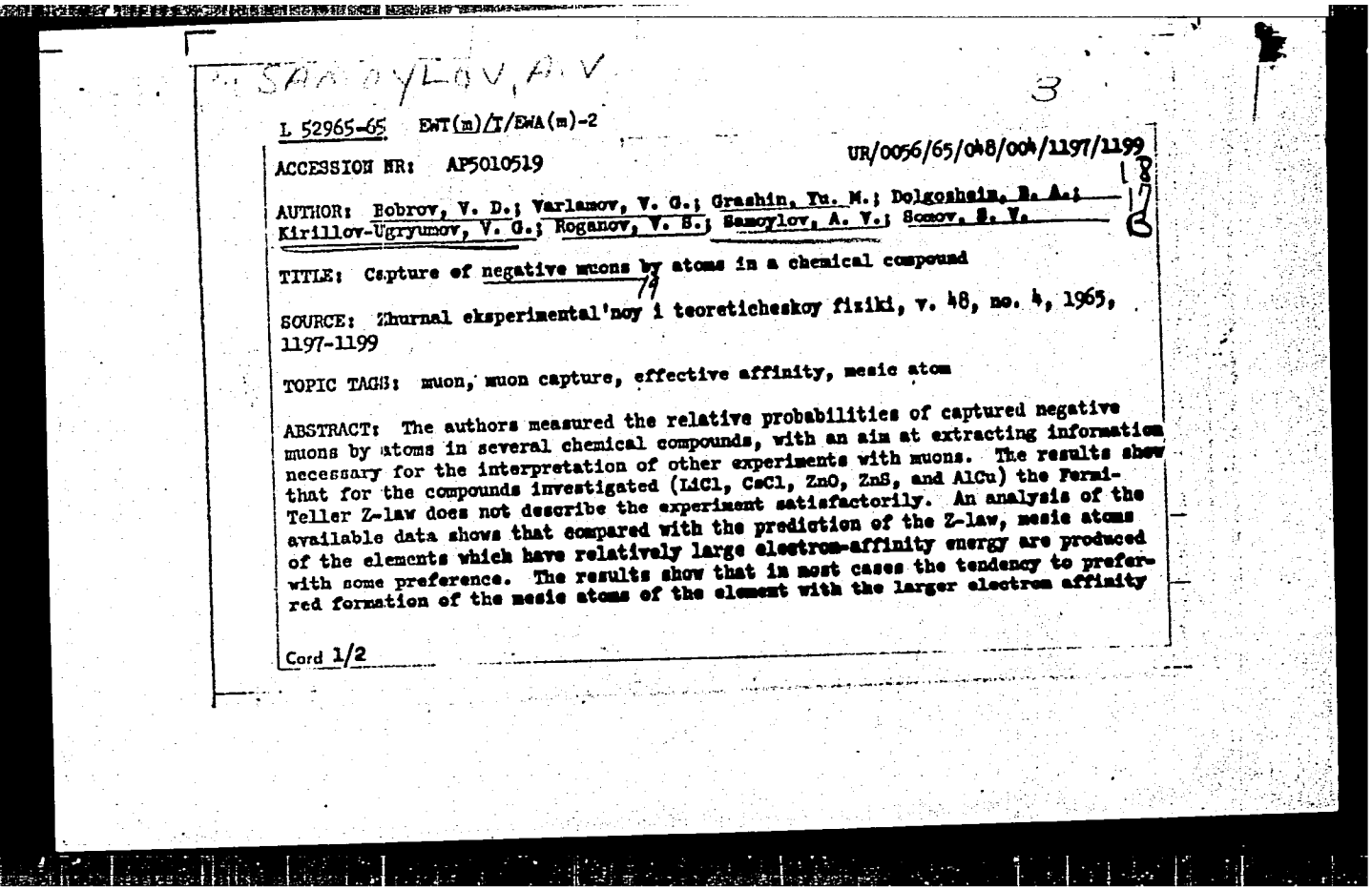

SAMOYLOV, A. V.

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L 52965-65 EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5010519 UR/0056/65/048/004/1197/1199

AUTHOR: Bobrov, V. D.; Varlamov, V. G.; Grashin, Yu. M.; Dolgoshein, B. A.; Kirillov-Ugryumov, V. G.; Roganov, V. S.; Samoylov, A. V.; Sonov, S. V.

TITLE: Capture of negative muons by atoms in a chemical compound

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1197-1199

TOPIC TAGS: muon, muon capture, effective affinity, mesic atom

ABSTRACT: The authors measured the relative probabilities of captured negative muons by atoms in several chemical compounds, with an aim at extracting information necessary for the interpretation of other experiments with muons. The results show that for the compounds investigated (LiCl, CsCl, ZnO, ZnS, and AlCu) the Fermi-Teller Z-law does not describe the experiment satisfactorily. An analysis of the available data shows that compared with the prediction of the Z-law, mesic atoms of the elements which have relatively large electron-affinity energy are produced with some preference. The results show that in most cases the tendency to preferred formation of the mesic atoms of the element with the larger electron affinity

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